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ABSTRACT

This report examines the potential of Quality Management (QM) to enhance system change by analyzing its implementation in three suburban public school districts. The paper assessed the capacity of QM to increase the efficiency and productivity of the school districts, validated the potential to sustain systemic change in a school organization, and determined the capacity to meet the needs of other school districts. For the research, qualitative data from three school districts in the northeastern part of the United States were collected. Three hundred subjects including instructional and noninstructional staff, leaders, students and stakeholders were interviewed; 100 teams were observed; and documents covering a 5-year period were analyzed. The data were used to compare and contrast the implementation of QM in the districts. Findings suggest that QM influenced leadership motivation for change and fostered three different collaborative implementation styles. QM was found to be adaptable to improving key school issues, such as human-resource development, academics, discipline, budget, and socialization based on team efforts and problem-solving approaches and benchmark practices. QM facilitated improved communication within organizations, including sharing of information through survey data, regular news publications, intervention, accountability, assessment, and planning team meetings. QM also enhanced collaboration and understanding among different members, departments, and buildings. Although QM appeared to be time consuming, it grew into a culture with members' and policy makers' involvement in team operations; which saved time, eliminated fear, and maintained stability. Appendices include Deming's 14 points and their application to education and school improvement, an example of quality workshop delivery, and sample interview questions. (RJM)

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Quality Management And System Change In Three Suburban Public School Districts

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QUALITY MANAGEMENT AND SYSTEM CHANGE IN THREE SUBURBAN PUBLIC SCHOOL DISTRICTS

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This comparative study used qualitative method to examine the extent to which Quality Management enhanced system change, through the analysis of the implementation in three suburban public school districts. The three selected districts had been implementing QM for the past six years. Six variables drawn from business research and literature were explored using 3x 6 matrix design to show the impact of QM on the efficiency and productivity of the school districts, the capacity to foster systemic change, and the potential to meet the needs of other school organizations. The variables included Leadership, Key school issues, Communication, Collaboration, Obstacles and Quality Outcomes. We interviewed 300 subjects including instructional and non instructional staff, leaders, students and stakeholders on their roles in the implementation, as well as observing 100 teams including the operational style, and analyzed documents (covering 5year's period) that described the framework of the organizations over 15 months' period. Results indicated that QM had a powerful effect on the mission and beliefs of the districts. It fostered understanding among members through team participation, and regular assessment of operations that resulted in improved staff's knowledge, efficiency of operations, and continuous improvement organizational-wide. But, QM requires strong and stability of leadership. It takes four to five years before significant changes can materialize in the pilot districts.

The States of New York, Connecticut and the Federal initiatives bring in a new reality, a new era of standard and a new understanding about quality management in the public school systems. Quality Management (QM) or Total Quality Management (TQM) is a business theory, problem solving, teams, and systems approach to the change process that promotes communication among members and enhances leader's commitment to empowerment, continuous improvement, efficiency of operations and increased productivity. Although QM of Deming has been successfully implemented in Japan as well as in the United States manufacturing industry, its potential for improving the educational systems has not been widely examined. Over the past 30 years, reformers have sought educational change in the United States Many of the solutions and efforts to reform have not brought about desirable changes. Our knowledge about change processes and the insights into what is successful and unsuccessful has become sophisticated. At the same time the problems that society faces have become complex. A few schools of thought have shown that change cannot be left to the individual school, and that changes initiated by individual schools do not last and are limited to those schools. Another one, spawned by a long tradition of organizational research indicate that these changes do not last because of lack of organizational-wide culture and policy to support it. Districts must be the initiator of change by creating a culture, policy and value conducive to excellence and include all schools and the central office so as to enable the success of every kid (Anderson & Cox, 1987; Fullan, 1991; Holzman, 1993; Louis, 1989; Sarason, 1982; Schargel, 1994). This means that doing something about the situation is a challenge -- a challenge the nation must face in order to prepare for the next century. The problem is enormous and deserves urgent attention.

The Problem

Since the publication of a nation at risk in 1983, Public Schools k -12 have been criticized for not keeping pace with with the changes in the society and the new technology. While the world is changing, schools need to change the ways it operates. Today, America faces a greater challenge with increased, diversity and high dropout rate in our schools. This is evident in the recent low performance of our schools

among the other hegemonic powers. The loss of public confidence in the systems, and the recent private sector's takeover of the management of schools are all indications that the future of public education is at stake. The call for vouchers and the debate about raising standards suggest that the need to reform schools realistically can no longer be delayed. The failure of schools to improve may lead to deterioration of American leadership in the global market (Drucker, 1996; Reich, 1991; Toffler, 1971). Studies suggest that the traditional way of management and the 'quick fix' approach is obsolete and is the dominant source of schools' failure. Neither the recent school based management (SBDM) strategy alone can help the system achieve wide spread changes needed in preparation for the next century (Schargel, 1994; Freeston, 1993; Fullan & Stiegelbauer, 1991; Taylor &Teddie, 1992; Schlecty, 1990). Schools and organizations failed to improve in the past because reforms were focused on results as opposed to process (Reich, 1991; Toffler, 1971). It therefore becomes imperative that reformers find a new and better approach to improve schools. Experts in organizational research observe that only a system approach that includes all parts of the organization that focuses on continuous (systemic) change can help public schools meet the challenges of the changing world (Bonstingl, 1992; Fullan, 1991; Holzman, 1993; Melvin, 1991; Sarason, 1990; Senge, 1991; Stampen, 1987). Incidentally, this is critical to the attainment of the national education goals. The question is: how best can these objectives be achieved? This makes it important that we examine the Quality Management theory that has revolutionized the manufacturing industry.

Quality Management And Education Change

The review of literature indicates that Quality Management (QM) is about profound knowledge and the 14 points (appendix A) of do's and don'ts of W. Edwards Deming of organizational effectiveness (Dobyns & crawford, 1991). The organization's acquisition of profound knowledge and ability to adhere to the 14 deadly management diseases will lead to a transformation of the organization, including structure, policy, people's way of thinking and attitude to work. Profound knowledge focuses on understanding of three things: theory of system, knowledge, and variation. Organization is a system that most leaders must understand and help others to understand how the system is interconnected. The interaction of all parts of the organization determines the system's performance, where change in one part ultimately impacts other areas (Deming, 1989). Excellence is an habit that emerges from perception. It is the perception that develops into a belief system that guides our actions to excellence. To copy someone's success without understanding can lead to a disaster. In the case of variation, a leader must learn to understand that people perform differently based on individual perceptions (Covey, 1990; Schenkat, 1993). Glasser (1989) affirms that QM originates from control theory. The Taylorism of the hierarchical and bureaucratic management system eliminates human interactions. This need can only be fufilled through team learning organizational structure (Glasser, 1989; Fullan, 1991). This is related to Deming who states that successful implementation of QM requires the top leadership who must sustain a paradigm shift to initiate the process. He indicates that 90% of the problems in organizations are due to the system structure and policy and not the employees. Policy can limit people's performance or aid them; good policy pulls the organization in one direction with employees working toward a common goal (Aguayo, 1991; Deming, 1986; Schein, 1997). Fullan (1991) agrees in his theory that the new paradigm of reform requires the staff to have stronger knowledge and skills which should be evident in the organizational culture and the day-to- day performance. Futurists argue that organizations most capable of surviving in the next century are learning oganizations dedicated to continuous improvement and strong relationships among employees. QM is synonymous to building a learning organization (Senge, 1990; Drucker, 1996). According to some experts, (Hellriegel, Slocum & Woodman, 1986; Crosby, 1992; Ouchi, 1981), QM is a research based, systemic principle, and value directed at, and include all members in the organizational management. It involves planning, doing, checking (measuring) acting, and learning from what works and what do not and why (Deming, 1986).

Critics challenged the potential of QM to improve education and argued that it was a business theory designed to make profits. According to the literature, no study had been done on the use of QM in education, but very few studies had been done on QM usefulness in business administration. The Florida Department of Public Administration (Bowman, 1989) conducted a study including some universities, the health and transportation departments involved in Quality Control (QC) practice. The survey was administered to 52 managers, 25 QC coordinators, 562 leaders, and 62 members. The study concluded that QC had improved management-employee relations through increased communication, change in attitudes, and management beliefs in improved employees' involvement. The quality of work life and job satisfaction improved and management had been able to develop leadership skills and witnessed increased productivity. In his pioneer four years study on Japanese management style that led to the development of theory Z, a model of QM, Ouchi found that theory Z focused on the total culture of the organization. It promoted activities that encouraged clear accurate communication that fostered by cooperative team approaches, in decision making and in the completion of tasks. These characteristics produced a dynamic, self-renewing organization. Some school districts had been testing the philosophy of QM in an effort to reform their schools and bring about systemic changes (Bonstingl, 1992; Herman, 1982; Rhode, 1990). These experts warnings, findings and claims raised important questions that led us to the study and assessment of the effectiveness of QM.

The Purpose of the Study

The study examined the potential of QM to enhance system change by analyzing the implementation in three suburban public school districts that had been involved in the philosophy over the last six years. Specifically, the study assessed the capacity of QM to increase the efficiency and productivity of the school districts, validated the potential to sustain systemic change in a school organization, and determined the capacity to meet the needs of other school districts. Studies in business administration showed that QM had been noted to prevent problems, reduce waste, cost and error. It fostered collaborative leadership styles, team building, system change, and interpersonal relationships in organizations while these elements impacted on high organizational performance (Ouchi, 1981b; Peter & Waterman, 1984; Miller and Sparks, 1984; Schein, 1990). However, it was not clear how and if QM helped the pilot school districts in achieving their stated goals. It became necessary that we asked these questions: how did QM foster leadership efforts for change in the pilot school districts? how did the districts discover and identify key school issues, using QM? what was the relative importance of communication and collaboration on the QM process in the three districts? what effects did QM have on teacher instructional practices and student achievement? what impact QM has had on the general organization, leadership, teachers, students, parents and organizational values? In order to provide answers to the various questions, we focused on four different objectives designed to : (a) describe the role of leadership and the process of implementing QM in the three districts, (b) explore how the 3 districts used the philosophy to improve human resource development, academics, discipline, budget and socialization, (c) analyze the relative impact of communication, and collaboration on the QM process, and (d) evaluate the effect or changes brought about by QM from the perspectives of the participants. These objectives formed the foundation of our inquiry into QM at Golden Star, and Merry Time, and Happy Time public school districts. We explored the design based on the nature of the change process and cultural multisite study as indicated by Lincoln and Guba (1985).

Design And Methodology

In the study, we utilized qualitative method, collected and analyzed descriptive data from the three school districts in the north eastern part of United States, using a 3 by 6 comparative case matrix design of Yin (1994). The study compared and contrast the implementation of QM in the districts. The six variables forming the vertical axis included:

1. Leadership: the roles of the superintendent, district administrators, principals, teachers and QM implementation styles.
2. Key Issues: human resource development, academic, discipline, budget, socialization and QM principles.
3. Communication: mission statement, team building, written and oral communication and its relative importance on QM process.
4. Collaboration: district teamwork, building level, cross - school interactions and impacts on organizational development.
5. Obstacles to Quality Management: by role, culture and stability.
6. Quality Outcomes: instructional practices, student achievement, student attitude, teacher and customers satisfaction, changes in cultural values and beliefs, and system-wide learning.

The three units of analysis forming the horizontal axis included the three districts (Golden Star, Merry Time and Happy Time) across which the 6 variables were examined. Data were collected over 15 months period, using Spradley's ethnographic methods: in-depth interview, non participant observation and document analysis (Bogdan and Bilken, 1992). About 300 members from different departments were randomly selected and interviewed on the process of QM implementation, the impact on how each operated, the effect on the organizational outputs and the obstacles confronting the individuals. Leaders were questioned on factors that influenced their desire to implement QM; the stages of development involved in the organization- wide process, including those that were outcome driven as well as the obstacles to the stability of QM. Different events including 100 instances of organizational interaction and operational style in teams' meetings, lunch- rooms, libraries, and teaching processes in the classrooms were observed. Documents and various artifacts (covering five years) describing organization's framework including means of communication and outcomes of operations were scrutinized. These included: newsletter, mission statement, memos, bulletin board, annual report, test scores, and team reports.

The data were analyzed in three stages using the Microsoft retrieving system with Miles and Huberman (1994) ongoing data reduction techniques and Strauss comparative (1987) methods. The researcher read the interviews, documents, and observation transcripts, raised questions for further clarification and interpretation, correlated similar ideas, written summaries, and eliminated redundancies. In the second stage, the researcher coded the data (summaries) based on the design and research questions, linked the interview, observation, document analysis and eliminated irrelevant data. The third stage included coding, and noting important emerging themes, its frequencies, sorting out similar themes and grouping together with the contrasts separately. The emerging themes were displayed, using a diagram to review, verify, and draw conclusions and report the findings.

Findings and Discussion

The data showed the importance of the leadership role in the implementation of QM and the application to key school districts concerns and problems. Furthermore, the changes and improvement elicited by the organizations and the extent to which QM sustained system change appeared evident in the outcomes of the study. These findings were reported under the following categories. Table 3 showed the information on the demographic comparison characteristics of the three districts (Golden Star, Merry Time & Happy Time).

Leadership

The three superintendents involvements in QM were originally motivated by some factors that appeared to pose challenges to the future of the organizations. They were influenced by the Federal and the States non mandated policy initiatives such as (a) The Education Goals 2000, (b) The New York State's Compact for Learning that described and invited school districts to focus on comprehensive reform and quality principles (Golden Star), (c) The Connecticut State Department of Education monthly

Table 1

Comparison of the Three Districts' Demographic Characteristics

Demographic Characteristics	Districts		
	Golden Star	Merry Time	Happy Time
Number of students/population	2134	3021	1000
Males	1047	1561	463
Females	1087	1524	537
Number of schools	5	6	5
Types and number			
Elementary	3	4	3
Grade level	K-4	K-6	K-6
Number attending	896	1870	589
Middle school	1	1	1
Grade level	5-7	7-8	7-8
Number attending	603	483	218
High school	1	1	1
Grade level	8-12	9-12	9-12
Number attending	695	668	191
Ethnicity percentage			
Whites	89.0	83.0	85.0
Asians	7.0	1.0	2.0
Black	1.0	7.0	5.0
Hispanics	2.0	8.0	8.0
American Indians	1.0	1.0	0.0
Socioeconomic background			
Under $11,000	20.1	29.9	35.1
Under $30,000	39.0	29.6	38.6
Under $50,000	21.4	30.3	26.3
Above $50,000	19.5	10.2	0.0
Staffing	350	402	139
CO/DS	33	24	15
Superintendent	1	1	1
Asst. superintendent	1	1	1
Directors	6	5	5
Curriculum	1	1	1
Spec. ed./PP	1	1	1
Business	1	1	1
Pus/Pmt	1	1	1

Table 1 (continued)

Comparison of the Three Districts' Demographic Characteristics

Demographic Characteristics Star	Districts		
	Golden Star	Merry Time	Happy Time
Comm. relations	1	0	0
Support staff	25	10	6
Building level	317	378	124
Principal	5	6	4
Assistant principal	2	2	2
Dept. chair	0	9	5
Teacher	260	258	93
Support staff	50	103	20
S/length tenure	8	5	7
Years of quality	6	5	5

Key. Assist = assistant; Spec ed = special education; PP = personnel; Pus/pmt = purchase an and payment; Comm = community; Assist = assistant; Dept. = department.

newsletter, as well as the regular superintendents meetings that were used to encourage school disticts to be committed to quality improvement (Mery Time and Happy Time), and (d) the pressure to lay a foundation for continuous improvement to meet the challenges of the changing world. The CEOS implemented the philosophy and tailored it to their individual needs, given the knowledge they acquired from conferences with QM experts in the private sectors, and extensive readings on the subject. The leaders made sure they had a rational explanation and the guide for all their intended decisions. They formulated and shared their visions with the constituents. The superintendents created a foundation group that wrote the mission statements, and organizational goals. They trained and empowered the staff. The implementation was focused on team organizational structure that included organizational wide participation: district administrators, principals, teachers, support staff, maintenance and food personnel, parents, board and community members, the central office and school buildings. The principals used the districts missions as a template for their missions. Teachers, district administrators and support staff rotated and chaired meetings in which they participated. The structure consisted of three sets of leadership as indicated by the Drucker Foundation (1996): formal (conventional leaders), ad hoc (team leaders), and active leaders (team members). The three CEOS implemented QM in three different ways but with similar participatory structures:

(a) The independent teams-based building and district-connected implementation (Happy Time). The buildings operated independent of the districts but connected to the district through their principals who were members of the district administrative and leadership teams.

(b) The interconnected teams-based building and district-connected implementation (Merry Time).

Almost every team in the district had a branch in the buildings. Each building team had two representatives in each district team.

(c) The centrally team-based building and district-connected implementation (Golden Star). In this model, the central team in the building was connected to the central team in the district and coordinated selection of representatives for the district and building teams.

The structure portrayed three different styles of participatory leadership and quality management. (table 4 illustrated the structure and the new leadership system). This led us to examine whether there were specific issues amenable to QM.

The QM Operations and Application to Key Issues

In order to understand how the organizations applied QM to their daily operations, we explored the district and school key issues, such as: human resource development, academics, discipline, budget, and socialization, and the effect of QM on these issues. The districts based the QM operations of the key issues on its understanding by using team thinking and planning process at all levels of the institutions. They utilized research and hunches, survey results, and organizational performance records to further the organizational goals. These findings cut across all the issues including the human resource.

1 Human resource development. Yearly schedules were planned by each district's assigned team. The three institutions provided ongoing workshops for the administrators, staff members, parents, and board members. The staff talents were utilized as an asset and organizational capacity to meet their needs. The teams kept their focus through constant examination of their mission and goals. The process enabled the districts to locate and direct attention to areas that were previously neglected. The specific fundamental ways they used the QM in addressing the human resource development included:

(a) team planning (e) inclusion and access of all staff (f) quality resource room
(b) opportunity for leadership development and utilization of staff talents,
(c) teacher supervision and support of principal (g) workshop evaluation for future improvement,
(d) quality design, and delivery of staff development.

The differences among the three areas lie in who presented the staff development programs. This foundation provided a variety of continuous support for staff s quality development. For the academic achievement, there was a slight difference in the process.

2 Academics. The process of improvement was based on teams ongoing research and evaluation to detect problems, and best practice and inculcate them into planning. The specific principles they utilized in improving academic achievement included:

(a) goals setting and objectives` focus, (d) constant assessment of organizational goals and planning
(b) review of tests and graduation records, (e) benchmarking and interschool visitations
(c) curriculum research and development (f) teacher involvement in case studies and (g) district-wide projects. The three organizations were different in that Golden Star was involved in using surveys to obtain feedback about its programs from internal and external sources. The districts utilized the information they gathered through the practice to guide their processes for improvement. QM enhanced the districts a planning culture with a focus on continuous academic improvement. The next section focuses on the issue of discipline.

3 Discipline. The school systems focused on solving the discipline problems through three elements of QM by using: *(a) collaborative planning, (b) joint enforcement*, and (c) data recording, and monitoring. The teachers' rules and consequences for poor behavior reinforced the students' good behavior. The central

Table 2

Quality Management Implementation, Team Structure and Leadership System in the Three Districts

Golden Star	Merry Time	Happy Time
	District Level	
District Leadership Team (DLT): Coordinator--assistant superintendent. Subteams: DLT broke up into subteams to work on different projects as needed.	District Continuous Improvement Team (DCIT): Coordinator--superintendent. Subteams: DCIT broke up into subteams to work on projects as needed.	District Total Quality Eduction Team (DTQET): Coordinator--superintendent. Subteams: TQET broke up into subteams to work on projects as needed.
District Administrative Council (DAC): Coordinator--principal (on rotation).	System-Wide Administrative Team (SWAT): Coordinator--the superintendent.	District Administrative Team (DAT): Coordinator--the superintendent.
Curriculum Council (CC): Each subject per team. Reading, math, technology, social studies, and writing, grades 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12. Coordinator--director of instruction.	Curriculum Task Forces (CTF): Instructional coordinating council, challenges and enrichment, early childhood, technology, language arts, math, health instruction, physical education, science, social studies, report card. Coordinator--director of curriculum.	Curriculum Development Task Forces (CDTF): Communication arts, science, diversity, technology, social studies. Coordinator--teacher specialist or subject/department chair.
Staff Development Team (SDT): Combined with curriculum development + new teacher. Coordinator--director of instruction and personnel director.	Staff Development Team (STD): Coordinator--director of curriculum and middle school principal.	Staff Development Team (SDT): Coordinator--each subject area's chair.
Child Study Team (CST): coordinator--director of special education	None	None (see the Administrative Council)

Table 4 (continued

Golden Star	Merry Time	Happy Time
	District Level	
Testing and Assessment Standard Team (TAST): Coordinator -- Director of Instruction	Testing and Evaluation Team (TET): Coordinator-assistant superintendent for curriculum and instruction.	Testing and Standard Team (TST): Coordinator--elected teacher or guidance counselor.
Labor Management Team (LMT): Coordinator--director of personnel	Policy Team (PT): Coordinator--assistant superintendent, director of curriculum.	None.
Budget Information Team (BIT): Coordinator--director of business and special operations.	Budget Planning Team (BPT): Coordinator--director of financial operations.	Budget Planning Team (BPT): Coordinator--business manager.
Support Service Department Teams (SSDT): secretary and clerk; maintenance, nurses, guidance counselor, psychologist, food service, teacher assistant. Coordinator--team leader.	Support Service Department Teams (SSDT): secretary and clerk; maintenance, guidance counselor; psychologist, teacher assistant. Coordinator--team leader.	Support Service Department Teams (SSDT): guidance counselor, psychologist, nurse and social worker, food service, maintenance, teacher assistant. Coordinator--team leader.
Parent Advisory Council (PAC): Coordinator--elected parent leader.	System Parent Council (SPC): Coordinator--elected parent leader.	District Parent Council: None.
Central Office Team (COT): Coordinator--superintendent.	Central Office Team (COT): Coordinator--director of personnel.	Central Office Team (COT): Coordinator--superintendent.
Senior Administrator Team (SAT): Coordinator--superintendent.	Central Office Administrator Team (COAT): Coordinator--director of finance.	Central Office Team (COT): Coordinator--superintendent.

Table 4 (continued)

Golden Star	Merry Time	Happy Time
Board of Education Team (BOET): Coordinator--elected president	Board of Education Team (BOET): Coordinator--elected president.	Board of Education Team (BOET): Coordinator--elected president
	Building Level	
Building Leadership Team (BLT): the chair--elected teacher, principal as a member only, not the chair.	Building Administrative Council (BAC): Coordinator--principal and sometimes an elected staff.	Building Site Based Team (BSBT): Coordinator--principal in each building.
Department Teams (DT): Coordinators--emerging teacher leaders.	Department Teams (DT): each team per subject. Coordinator--the chair.	Department Teams (DT): Coordinator--the chairs.
Grade Level Teams (GLT): Coordinators--emerging teacher leaders.	Instructional Support Teams (IST): Coordinators--appointed teachers.	Instructional Teams (IT): Coordinators--appointed leaders.
None (see grade level teams).	Instructional Team and Curriculum Coordinating Council (ITCCC): Coordinator--the elected team leader or the principal.	None. See the instructional team.
Staff Development Team (SDT): None. See grade and department level.	Staff Development Team (SDT): Coordinator--elected teacher leader.	Staff Development Team (SDT): Coordinator--teacher leader.
Child Study Team (CST): Coordinator--the reading specialist, the psychologist, or the guidance counselor.	Child Study Team (CST): Coordinator--psychologist or guidance counselor.	Child Study Team (CST): Coordinator--psychologist or social worker.
Budget Team (BT): see BLT.	Budget Team (BT): Coordinator--an appointed leader.	Budget Team (BT): Coordinator--team leader.
Parents Team Association (PTA): the chair--elected president in each building.	Parents Team Association (PTA): the chair--elected president in each building.	Parents Team Association (PTA): the chair--elected president in each building.

office or buildings' policy-writers and discipline teams included parent representatives. Every adult in each setting helped students focused on their best behavior. The data recording and monitoring helped to keep the focus on continuous planning and improvement. The practice created accountability structure guaranteed by team management and reasoning. The differences among the districts were that the Golden Star area kept records of students who misbehaved on the school buses. The district of Merry Time required each of its schools to submit to the central office every year, the statistical data, detailing monthly population of students who had disciplinary infractions including the efforts they expended to rectify each situation. Through these methods, the districts addressed discipline problems on a continuous basis, which resulted in fewer incidences of student infractions in each setting. For example, class cutting and vandalism were completely eliminated in two of the districts within five years. Similar strategies were applied to budgetary issue.

4 Budget. The organizations applied QM to budgetary improvement by engaging in cost analysis and fund management, benchmarking, and public relations practices. They utilized inputs from staff members in the selection of school supplies and purchases. Budget cuts were discussed with the staff through constructive communication aimed at understanding. The community members were included in budgeting decisions and allowed to communicate their expectations to the districts. Through the process, the districts became aware of the amount of tax dollars that the stakeholders were willing to sacrifice in supporting their programs. This shared communication and mutual understanding resulted in community support of the budgets. The budget votes were passed free of problems in each setting for the last four years. The Golden Star district differed from the other districts because it shared expenses with other districts. The district used to organize more public relations forums and presentations to gain the support of its external and internal publics. The highlights of the program often included such discussions as students academic achievement and fund management in comparison to other districts of its caliber and records of six years. Through benchmarking, Happy Time was able to stabilize the medical insurance cost (that used to rise every year) for five years. The budgetary practices inevitably minimized problems, changed people's perception, saved money, and ensured efficiency. Socialization was a natural part of the process.

5 Socialization. The QM team structure formed the foundation for the socialization of various internal and external constituents of the organizations, such as policy makers, principals, teachers, community members, students and parents. The system of data collection and monitoring of social interaction led to planning and continuous improvement on an ongoing basis. Several programs emerged from the practice. For example, these included: (a) the bi- yearly picnics and retreats at Merry Time, (b) the end of the year's party in the three districts, (c) The "Monday morning mumbling breakfast" at a Golden Star elementary school, and (d) the education week (in the middle school) where parents, teachers, special education, and regular students used to spend a day of fun together. Every student participated in one or more extracurricular activities. 90% of the students emphasized in the interview that extra-curricular activity was one of their favorite school programs. All the three districts explored similar strategies of QM utilization to enhance social interaction. Based on the QM team structure and data monitoring, the self-esteem of adults and children became accelerated and the contribution to the climate of the organizations was productive. In this study, we also examined the extent to which QM facilitated communication among members and its effect on the organizations.

Communication

All team activities served as information brokers, and organizational problems were resolved through the construct of communication. The three districts utilized multiple channels of communication

in an effort to maintain the implementation. These included surveys, team reports (data), mission statement, newsletters, memos, newspapers, bulletin boards, videos and teams' meetings. People were informed on a timely basis, and News from various school departments and district teams were shared through the channels. The surveys enhanced feedback from staff and community members on organizational performance. Mission statement facilitated debates among groups on the consistency of the districts operations in all assessment meetings. The buildings' bulletin boards mirrored information about plans, articles on teaching and learning methods, new research findings, workshops available both at the internal and external level, teacher fellowship, graduate courses, board programs and classroom management. The area of Golden Star was different in that it was involved in the comprehensive use of survey communication. The use of QM facilitated two way communication, an open organization with no hidden agenda or surprises and no discrimination in sharing information among members. Members were supported with enough information to do their work. The elaborate communication system in the districts led us to examine the impact of collaborative and cooperative environment on the QM process.

Collaboration

The collaborative environment emerged from the team structure and foundation of the implementation of QM. Each team managed a different function in the three settings. At specific times of the week or month, all the teams dashed to different rooms for the culture and regular deliberations. Through the structure, professionals enhanced information sharing on the organization's needs and the procedures on addressing them. Emerging problems from any part of the organizations were resolved immediately through the collective intelligence of teams' members. The team efforts became possible through understanding and exchange of ideas during intervention, accountability, assessment and planning meetings. Decisions were made promptly because the diverse people affected directly were part of the specific teams. Most discussions were focused on how to help kids to succeed, such as described below:

> No one thought teachers were knowledgeable before. As schools become more knowledge based, teachers will gain high respect. The idea of a service learning requirement for our commencement goal originated from a teacher's idea in a district leadership team meeting. One day, the teacher said, "We have been talking about how to help kids succeed. No one talked about decision making. Kids do well because they make good decisions. They go wrong because they make poor decisions." We all did not think that way before. But her explanation motivated us to think of how to help the kids (Golden Star's community member).

> Many ideas have come and gone but the QM is here to stay. It helped us to explore diverse knowledge to support our schools. But I still believe that the superintendent should mandate the staff to participate because not all of them are involved (Happy Time's parent).

> Having the opportunity to work in an environment where people get together to iron out our problems through collaboration creates a bond among us. We feel free with each other because nobody is out to witch-hunt each other (Merry Time's teacher).

The process facilitated collegiality, unified organizational thinking, and people's ownership of their work. Members' knowledge of operation became broadened through the practice which caused the enlightened organization to be active. This resulted in building strong relationships among members and within the organizations. QM is therefore an integration of human relations and human resource schools that is in correlation with Goldhaber's theory (1990). Although the three districts' differences were based on the nature of implementation and team structure, most issues they addressed were similar. In order to identify the prospects for the stability of QM, we explored the visible obstacles to the implementation in the three settings.

Obstacles

The teachers' complaints included lack of time and too much work, while the superintendents were concerned about the isolation of veteran teachers. The principals shared the same problem as the superintendents. Among others, a teacher at one of the school systems commented in the interview, "It is

too much work, there is no sense of closure, the teachers' different opinions sometimes seem to create frustration for others, but two heads are better than one." "I was kind of hesitant at the beginning about being part of the group, but when I got to understand more that it was a way to assess what I do on a continuous basis to improve learning and teaching, then I was kind of relaxed," explained another teacher in another district. Teachers that formerly opted out of the program were naturally drawn in by the excitements generated by QM in the environments. Policy makers' participation in major teams, including ongoing assessment of programs, and availability of training resources for the staff, helped the districts strengthening the prospects for stability of QM. To sum up the study in order to understand what impact the implementation has had on the districts, we looked at the following items of organizational characteristics of effectiveness: instructional practice and student achievement, teacher satisfaction, customers' satisfaction, value and cultural changes, and the knowledge gained by the school systems.

Quality Outcomes

The team (new) organizational structures and the human resource program exposed teachers to learning in each setting. The teachers learned from working on different projects and problem solving activities that increased their understanding of the school mission and expectations. The teachers used constructive teaching methods, team building and hands-on exercises that enhanced students excitements in the classrooms. Some teachers asserted that they constantly assessed their teaching skills and used the results to raise the standards of their instructions unlike before. If they tried one method and it didn't work, they would try other method. No teachers teach behind closed doors anymore because of the trust and confidence enhanced through QM by the staff. The Merry Time district was different in that the instructional models and practices went beyond the classroom by promoting work on sophisticated projects. The students built a model of space shuttle and an electric car in the industrial arts and technology's class. All of the districts' instructional practices were focused on motivating children to think:

> Now teachers give lectures and have us take notes instead of writing everything on the board. We are taught to be more independent. They see if you can understand what is going on and what they are teaching. They want to see if you can come to some conclusion yourself. (Merry Time eighth-grade student).

> I enjoyed participating in group work. I make friends and we--got along with each other. I learned from listening to each other. I think a sense of independence will be helpful to me in the future because many organizations require workers that can use their brains well to accomplish a task. Sometimes they require people who can work without supervision. (a grade-12 student at Happy Time).

Students became more in tune with learning and striving for high achievement:

1. High school enrollments in advanced placement courses increased consistently.
2. More Golden Star students graduated with regents diploma
3. Happy Time 's elementary students improved in communication skills.
4. Merry Time students voluntarily pursued projects of learning of interests.

Tables 3 and 4 provide more information on the student achievement.

Some teachers reported that they derived a sense of pride from their involvement and in working in a world class organization that continuously strived to improve. They appreciated the experience and paradigm shift fostered by the new structure that enabled them to succeed. Others said, things they wouldn't like to do before, now they would gladly do it. The teachers expressed a sense of satisfaction with the organization.

Table 3

Advanced Placement Courses for the Three Districts' High Schools: Number of Students and Participation Rate

Year	Golden Star	Merry Time	Happy Time
1991/1992	75	48	8
1992/1993	100	56	10
1993/1994	100	63	17
1994/1995	100	75	21
1995/1996	240	102	26
1996/1997	250	150	32

Table 4

The Three Districts' High School: Percentage Graduating with Regents Diploma

Year	Golden Star	Merry Time	Happy Time
1991/1992	40	NA	NA
1992/1993	50	NA	NA
1993/1994	55	NA	NA
1994/1995	57	NA	NA
1995/1996	63	NA	NA

Note: Students graduating with Regents diploma increased by 23% in 5 years

Students' attitudes changed because students felt challenged, achieved more, and were happy. They participated in extracurricular activities more often. The students abstained from practices that impeded their learning.

> I enjoyed participating in group work. For example, in class government, I am having fun! On the subject of immigration, putting together a book on immigrants. I learned--how to change a

> law in the community. Before, I hated computers, but now I want to become an architect and computer is [sic] important. So I like it. I am [was] in a clique before; now I am more independent (Golden Star grade-11 student).

More students developed compassion and acceptance of others.

> Teachers are vigilant, they can tell when a student is not working or doesn't understand and they sit with you. I think a lot of my skills have to do with sports and learning how to be cooperative with people in situations. The togetherness that you have as a team you can't yell at someone. I have learned that we all have to be cooperative in teams (Happy Time 7th-grade student).

Parents and stakeholders were satisfied with the level of education that the school was imparting on the children. They expressed joy and appreciated the students' achievement. They were friendlier and worked with the staff and principals as partners because they participated in different teams and contributed to the schools' efforts and performance.

The organization's values changed from top-down management philosophy to the QM principle of management. "I have always believed in empowerment of staff to make decisions, but the central office bureaucracy and policy impact on us made the principals appeared autocratic. Now, with QM team structure, we understand what they do. We know that what we do is to support what they do. Now, the teams make decisions and I have time to take care of important issues," said a principal. "We do not hire people that don't believe in change. In my team, we hired the new principal because we saw the quality in him" (a district administrator). The curricula were changed based on the needs of the students. The three districts became more goal oriented, resulting in an improved curriculum standard and expectations. Students are now required to take four years of Science in high school as opposed to the previous two years. The organizations worked to achieve efficiency in all areas of operations including fund management. The focus of all operations was on the future in the three settings as opposed to the old way. Because of the confidence enhanced the organizations by QM, the three CEOS were motivated and constantly offered their districts for external assessment (Baldridge Quality, State, and National Awards) to improve their programs, since involved in QM. Golden Star freequently participated in international assessment. The students did better in grades 4 and 7 math's achievement test and high school enrollments in Advanced courses, than some highly industrialized nations (see table 5 & 6).

At Merry Time, changes to the curriculum that did require the stakeholders' approval now require the coordinating council and professional's approval. Guidance now works in collaboration with teachers as opposed to the old system of working against each other. The custodians rate of absences reduced. The food service changed the hamburger style based on interviews with students.

In the district of Happy Time, all of the teachers became teachers of all children, not just teachers of regular or special education classes. Principals were in tune with the open-door policy because of the change in values that resulted in an open climate.

The Golden Star district measured itself against its devised success indicators based on the three goals: academic performance, perception change, and fiscal stability. The custodians constantly kept the physical plant and buildings in healthy condition. The guidance department changed its schedule based on the feedback from parents. Computer instruction was upgraded based on an alumni feedback survey. A 21st-century science lab was constructed.

In the three districts, the leaders learned that the top- down style of leadership alone does not facilitate school improvement. This is in correlation with Fullan (1991), and Marsh & Bowman (1988) who have observed that the top down has to fuse with bottom up style to enhance organization's effectiveness. The external community found that they needed the school and vice versa. Districts, schools and staff learned that the traditional way of operation was boring. They learned that after QM, they can never remain with the same attitude. They asserted that QM had taught them to continue to strive for improvement. The next section highlights the summary of the findings.

Summary and Theoretical Interpretation of The Implementation.

The evaluation of the findings showed that the three institutions based the implementation of QM on Deming`s three concepts:
(a) The concept of profound knowledge (the foundation of the implementaion) -- the leadership understanding of QM created the bases for team structure.
(b) The 1st of Deming`s 14 points: maintaining constancy of purpose (the driven force for improvement) -- the districts operational style was designed to maintain consistency with the mission statement.
(c) The 5th point: the continuous improvement (the end point) -- the regular assessment practice was designed purposely to plan and modify operations as necessary (profound knowledge + maintenance of purpose = continuous improvement). The remaining 12 Deming`s points emerged naturally out of the actions that focused on achieving the three concepts. For more information, see figure 1. QM in this context was defined as the principles of management that enabled people to use the knowledge of operations to change an organization`s perception. It fostered members` understanding and focused their attention on achieving the goals and mission, as well as operating to maintain constancy of purpose through regular assessment of operations that enhanced continuous improvement. With regular assessment (districts' and schools' inventory practice) followed by planning and modification, growing and learning is never ending. The philosophy of QM integrated seven elements: leadership, organizational team structure, people, training, technical know-how, assessment and attitude. The leadership implementation styles, and the organized team structure led to an environment supportive of ongoing staff`s training and development. Workers acquired up-to-date skills and the core technology that enhanced their confidence in the task's performance and regular assessment of the operations. The staff`s success became possible through the acquisition of substantive knowledge of their work and the new experience. This subsequently generated in the three districts the good work ethics including the attitude and pride of workmanship that resulted in constant strive for improvement. Consequently, the interaction of these seven elements of **systemic change** gave rise to improved organizational performance. This concept builds on the work of Herriegel, Slocum, and Woodman (1986). Figure 2 showed the diagram of the structure. The next section discusses the highlights of the conclusions.

Table 5

International Comparisons of High School Seniors (Grade 12) Who Take and Pass at Least One Advanced Subject Specific Exam.

	% Take	% Pass	Overall Passing by 100%
United States			
Golden Star	44	33	75%
England and Wales	31	25	83%
Germany	37	36	98%
France	43	32	74%
Japan	43	36	84%

Source Information based on 1994 record.

Table 6

International Mathematics Achievement Test: Percentage of Students Passing

Countries	Scores 1994	1995	1996
Grade 7			
United States			
Golden Star	72	78	85
Merry Time	NA	NA	NA
Happy Time	NA	NA	NA
China	76	77	79
Hungary	64	68	64
Korea	69	71	68
Russia	63	64	60
Taiwan	68	69	64
Switzerland	71	70	71
Grade 4			
United States			
Golden Star	84	87	84
Merry Time	NA	NA	NA
Happy Time	NA	NA	NA
Hungary	76	68	68
Italy	68	68	68
Korea	80	75	75
Russia	64	66	66
Taiwan	72	75	68

Note Golden Star took the International Achievement Test for the first time in 1994

Figure 1.

Path Diagram Showing Quality Management and Circle of Operation and Concept of Reengineering Process in the Three Districts.

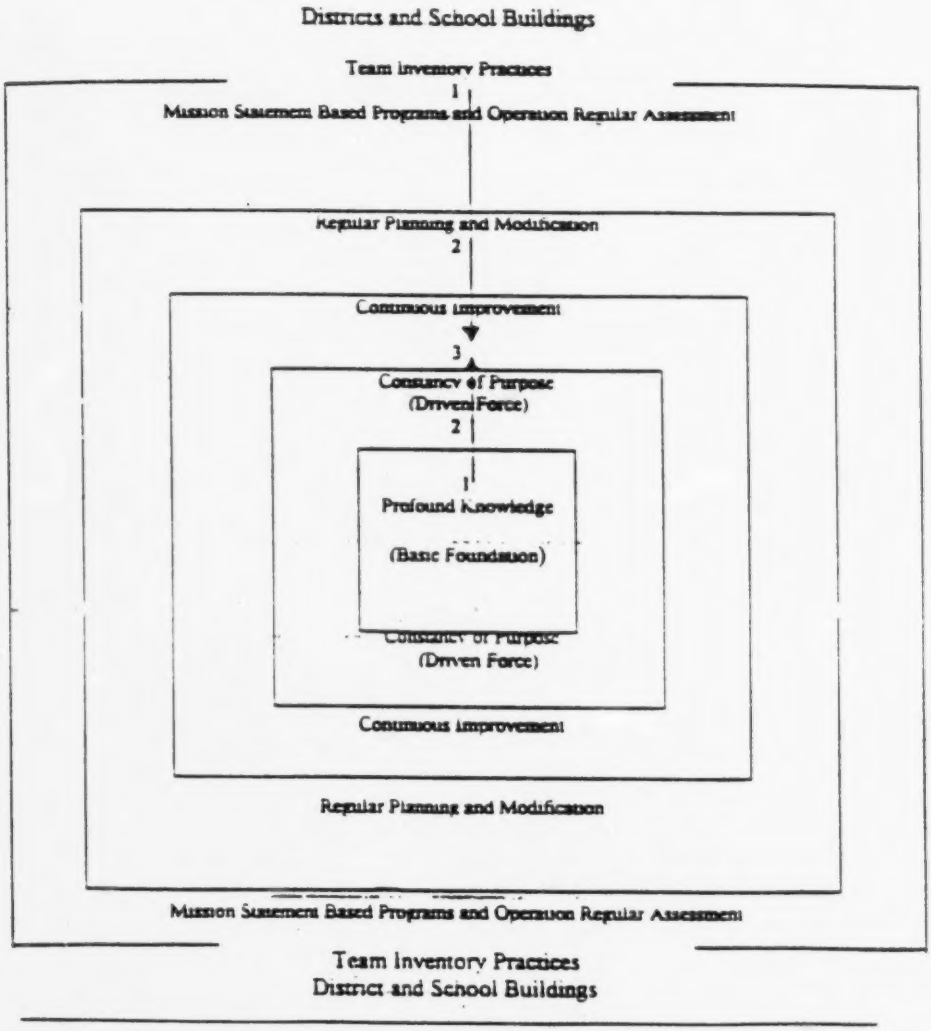

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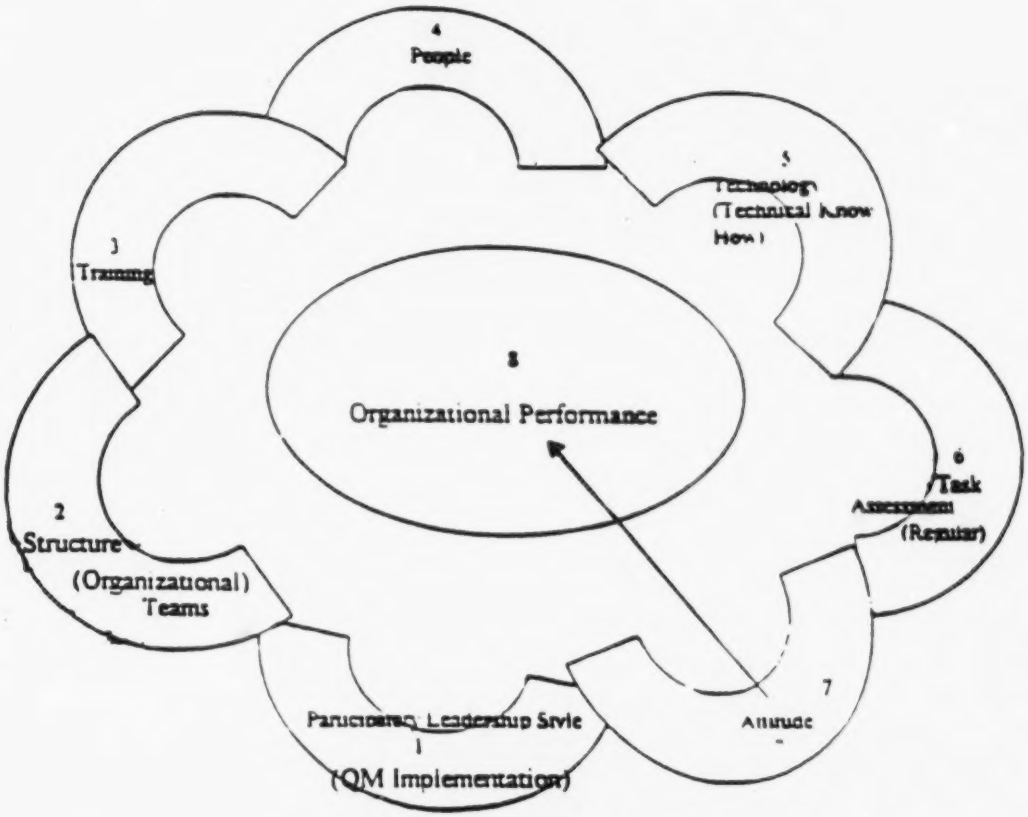
Figure 2

Diagram Showing Quality Management Style - - Integration of Seven Elements of Systemic Change in the Three Districts.



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Conclusions

The results indicated that the philosophy was a rengineering process, and cause and effect phenomenon:

1. QM influenced leadership motivation for change and fostered three different collaborative implementation styles (through their knowledge of the theory). Figure 3 illustrated the concept.
2. QM was found to be adaptable to improving key school issues: human resource development, academics, discipline, budget, and socialization based on team efforts and problem-solving approach and benchmark practices.
3. It facilitated improved communication within organizations, including sharing of information through survey-data, regular news publications, intervention, accountability, assessment and planning team meetings.
4. QM team structure facilitated collaboration and understanding among different members, departments, and buildings that evolved into relationship development.
5. Although QM appeared to be time consuming, it however grew into a culture with members and policy makers' involvement in teams' operations, which saved time, eliminated fear, and maintaining stability.
6. QM fostered teachers' expansion of knowledge based on collaborative experiences, ongoing staff development resulting in quality teaching: students' attitude change high student achievement, and yearly increases in graduation rate, and ultimately teachers' and customers' satisfaction. It facilitates effective operation, resulting in improved budgetary management (see tables 7 & 8).

In conclusion, QM increased the districts' efficiency and productivity, and fostered systemic and continuous change. QM also fostered other organizational systemic changes needed for the 21st century through adaptability, development of proactive capabilities, learning environment, and the generation of information. Collectively, QM enhanced a complete system change on a continuous basis. QM worked in the three districts, but the process requires strong leadership. Where there was a break in stability of the leadership, QM did not work. The pilot study of other districts during a preparatory work presented a strong evidence. No significant changes can occur in less than 4-5 years. However, the study helped establish a baseline from which other school systems can start the implementation. The evidence suggests that school leaders should be trained to use the principles of QM. It has the potential for helping the leaders meet the challenges of the 21st century school improvement needs. The following recommendations are important for organizations interested in implementing the philosophy in their settings.

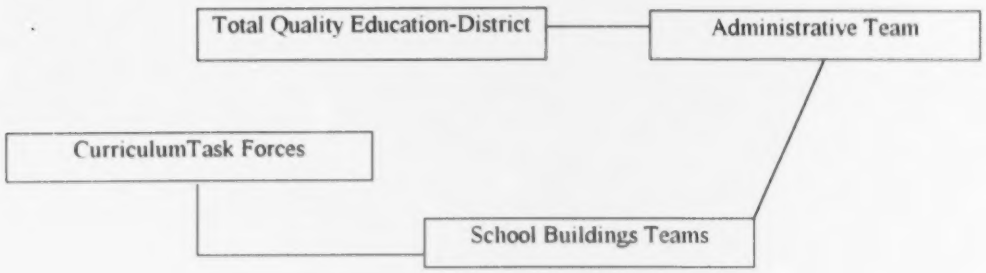
Recommendations For Practice

1. Urban organizations interested in implementing QM would need to break down their organizations into regions or to building levels to facilitate effective team interaction and decision making. The mission statement must be concise, easily understood by members to be translated in the excution of their responsibilities. The independent implementation style seems appropriate for urban school districts.
2. The school of educational administration must make public relations and communication a significant part of their curriculum. The study showed that QM implementation was successful because of the administrators' skills in communication and public relations.
3. Adopt the culture and prepare an annual report booklet that summarizes the objectives and the system's operations, including new measures undertaken and their results. This will not only strengthen the organization's skills for data collection, utilization and decision making, but will strengthen its capacity for accountability. The following implications emerged from the findings for further studies.

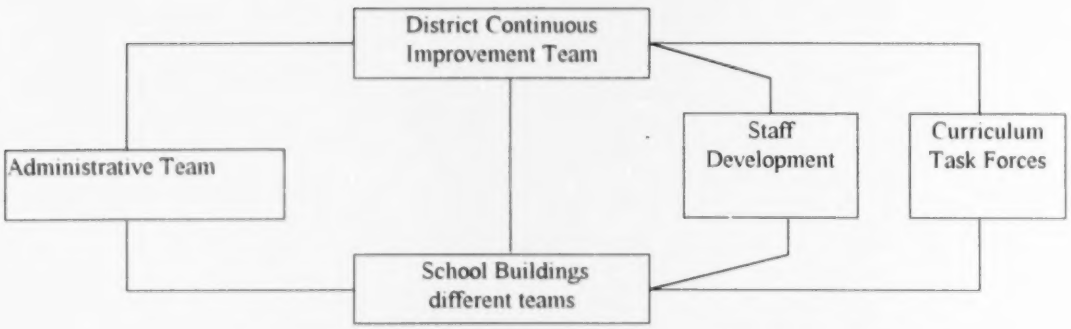
Figure3

Diagram Showing the Three Leadership Implementation and Participatory Styles of Quality Management.

A. Happy Time (Independently Connected)



B. Merry Time (Interconnected)



C. Golden Star (Centrally Connected)

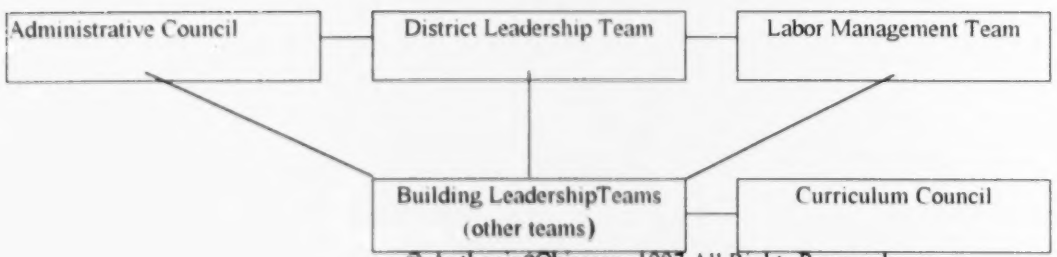


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Table 7

Percentage Graduated

% Grad	4-Year ED	2-Year ED	Other ED	% EMP	DRP Rate	Other	Total % ED	Total EMP	Year
				Merry Time High School					
96	64	15	3	14	4	6	82	8	1991/1992
97	58	22	5	12	3	4	85	8	1992/1993
98	56	8	7	21	2	2	74	22	1993/1994
100	71	14	1	11	1	1	86	13	1994/1995
100	75	11	1	13	0	0	87	13	1995/1996
				Golden Star High School					
97	46	37	6	8	3	3	86	8	1991/1992
98	56	35	2	5	2	0	93	5	1992/1993
99	52	38	2	7	1	1	91	7	1993/1994
100	55	34	4	7	0	2	91	7	1994/1995
100	63	30	2	5	0	3	93	4	1995/1996
				Happy Time High School					
75	30	2	9	34	25	10	31	34	1991/1992
85	35	10	5	35	15	8	40	37	1992/1993
92	40	24	3	25	8	5	47	50	1993/1994
94	36	13	4	41	6	7	45	42	1994/1995
97	47	24	0	26	3	0	71	26	1995/1996

Key: ED = education; EMP = employment; DRP = dropout rate; % Grad = percentage graduated

Table 8

Percentage Budget Voting Patterns Per Year (customers' satisfaction)

Year	Golden Star	Merry Time	Happy Time
1990/1991	59	62	51
1991/1992	71	68	52
1992/1993	72	71	55
1993/1994	76	70	64
1994/1995	77	100	68
1995/1996	74	100	72

Implications For Further Studies.

The outcome of this study clearly indicates that more work needs to be done. Further research work should be focused on the following areas:

1. A longitudinal Study on the characteristics of leadership communication styles in a quality school or a case study on the impact of QM on leadership communication styles for organizational development.
2. The effect of the State Education Policy on quality improvement in the public school systems.
3. A comparative study of the QM schools and some excellent schools but not involved in QM.
4. The role of information management in decision making for quality school improvement. These studies will make useful contributions to knowledge.

Contribution to Knowledge and the Difference from Past Theories

The study provides insights for educators and scholars in that it: (a) shed light on different participatory leadership and implementation styles of QM, (b) contribute to the development and understanding of a systemic change model of education and reengineering process, (c) provide a guide to how the school administrators can implement the philosophy as well as yielding a clear definition on the applicability of the theory of QM "system change" to the education systems, (d) generate questions for educational researchers and provide linkages between theory and practice. QM is a change theory, and method susceptible to helping schools meet the needs of the changing world. It is a belief system and culture of acceptable organizational standard of operation. QM builds on the combination of three concepts of democratic, top down and bottom up leadership styles, but different in that it requires understanding, design, implementation and maintenance for oganizations to be successful in using the philosophy. QM is about leadership, understanding, team organizational structure and school wide-participation, data based decision-making operation, and performance improvement. Every school system is varied in resources and structure, but they all possess common goals. QM works in the three school districts. The implementation process is replicable in any school systems.

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APPENDIX A

Deming's 14 Points and Their Application to Education and School Improvement

According to Deming, his 14 points apply to manufacturing and service organizations. Experts say that as education is a service organization, each point applies in the following ways:

Point 1: Create constancy of purpose. This means that the educational organization must not slow down in its pursuit of improved student achievement. This suggests that all programs that consume critical resources must be examined systematically, and those that do not contribute to student achievement must be eliminated. Students, parents, support staff, teachers, administrators, school board members, and the community should share a common understanding of the desired outcomes and consistent belief that this result can be achieved. Willingness to measure progress should be adopted, along with goals based on long-term commitment.

Point 2: Adopt a new philosophy. This indicates that the philosophy for ensuring quality education should be adopted within the school division. The philosophy should be a transformation of a new thinking and planning for student learning in a rapidly changing world. For school organizations to meet the change, it requires that they avoid hierarchical management and the acceptance of the status quo. High expectations for all their students should dominate their belief system. They should work constantly in pursuit of this goal so as to translate it into a reality.

Point 3: Cease dependence on mass inspection. This means that a school district's new philosophy should emphasize moving from identification of student failure to preventing student failure through continuous improvement. Teacher supervision should be based on collaboration and support to ensure cooperation and improvement that focus on student achievement by all involved. Measuring student progress should be ongoing on a daily basis.

Point 4: End the practice of awarding business on the basis of price tag. Educational organization investment in quality should include all segments of the educational process. The district should choose to use and evaluate selections of facilities, textbooks, technologies, and other resources in teaching based on statistical evidence of the success of a particular product, not on the low prices or the name tag, but upon accepted outcomes of measurement. In the long run, it saves money and ensures quality.

Point 5: Improve constantly and forever the system of production and service. The school district and its environs must institute the belief system that improvement is not a one-time effort. There is a potential for improvement in every step taken to create or upgrade school programs, services, and instruction. Making a commitment to constantly improve the system should dominate the school's perspective. This requires continually identifying barriers and seeking workable solutions to improve the process.

Point 6: Institute training on the job. The idea here is that the school division must constantly stay abreast of changing demands and requirements. School districts must provide all employees with training, quality leadership, measurement, analysis, problem solving, self-evaluation, and assertiveness training. The school district must believe and execute the belief that inservice is an integral part of school improvement plans.

Point 7: Institute leadership. What this means is that the job of management is not to tell people what to do but rather, to lead people in the right direction. They must emphasize the quality of the total program rather than individual behavior. Evaluation must be pragmatic, systemic, and formative.

Point 8: Drive out fear. This means (in education) that the school organization must have respect for the basic human dignity of others. The belief by psychologists is that one of the best ways to help an individual acquire a good self-image is not to do anything to damage it.

Point 9: Break down barriers between departments. This suggests that the school division should be committed to rebuilding and nurturing an environment in which trust and respect can be applied to what is said, heard, read, and written. Schools must break down barriers by problem solving through teamwork and combining efforts of people from different school areas. This will ensure interconnection of communication for the quality improvement of service and products.

Point 10: Eliminate slogans, exhortations, and targets for the work force for zero defects. This means that the school districts division should believe that school employees should always strive to continually improve.

Solving all problems in a school system at one time is impossible. Waiting until a crisis strikes is a detrimental way of solving problems. This idea often results in frustration for schools and problems become compounded rather than being solved.

Point 11: Eliminate numerical goals and quotas--management by objectives. This means that the school districts should place less emphasis on numerical goals and more on individual student progress. They must be committed to a long-term process. All educational employees should be actively involved in identifying problems, designing programs, planning, budgeting, and selecting materials. This is more satisfying than the external rewards of merit pay for raising test scores.

Point 12: Remove barriers that rob people of pride in workmanship. This suggests that the administrators should eliminate fear at all levels of the school operations. Provision of employees with an opportunity to succeed includes inculcation of confidence in order to achieve professionalism. A system of close supervision should be eliminated. That requires encouraging nonthreatening, two-way communication on quality outcomes among all levels of the organization (e.g., student and teacher performance assessment) which ensure job satisfaction and optimize productivities.

Point 13: Institute a vigorous program of education. This is to ensure self-improvement. Comprehensive understanding of the past, the ability to assess the events that led to the present, and the ability to forecast the future needs and requirements, all demand an entrepreneurial approach. The belief of the school organization or administration must include the idea that conceptual skills development is a critical ingredient in moving from traditional management practices to Quality Management practices. It is believed that the teacher resource center should encourage individuals to seek and use the resources for self-development. The development of employees will lead to the development of the children, which is part of the Quality Management techniques.

Point 14: Put everybody in the company to work to accomplish the transformation. This suggests that educational leaders must move toward processes that are geared toward the prevention of problems. It takes years to accomplish this transformation. Everyone in the system (superintendent, central office administrators, principals, teachers, support staff, students, parents, and community partners) is responsible for helping to bring about the transformation by performing their role in a responsible manner that will keep change in focus. Such a transformation therefore comes by evolution as opposed to revolution (Blankstein, 1992; Bonstingl, 1992a; Herman, 1992; Melvin, 1991).

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APPENDIX B

The following represents an example of quality workshop delivery from the transcript's Journal. Benchmarking assessment. During this workshop in the Golden Star district, the grade 3 teachers were given the rubric that listed the standard for grading or measuring the students' work. The rubric described the level of writing that merited "excellent, typical (average), or low." The teachers worked in two groups. They came with the essay papers from their schools. The director collected the essays from the teachers and distributed them to teachers in each group. He encouraged the teachers to follow the district expectations and used the rubric to grade the papers. Teachers were encouraged to read through each paper To assure a fair assessment. The teachers sorted the papers according to excellent, typical, and low. Those that they did not agree on were put together as they struggled to reach an agreement. The best work was identified through benchmarking of students' work against the top five and against one another. Discussions on the papers ranged from indentation of paragraphs and syntax to vocabulary and neatness. The teachers became involved in using the terminology as they sorted out the papers: "Do you want to kick it a typical?" If they all agreed, all would say it in a quiet tone. When they seemed in doubt, they always referred to the expectations sheet to analyze the work. One member in the process commented: "The language is good." Another affirmed, that "The diction vocabulary is advanced; the essay reflects a personal voice." Whenever they found an essay interesting or the contents informative, it frequently stimulated discussions among the groups. Finally the director stopped the activity and told the two groups to exchange the papers and confirm the justification for the grading. Each time the teachers in another group disagreed with the grade awarded a paper, the group concerned disagreed and yelled out typical, low, or excellent as they continued their verifications. At one time another member disagreed with a paper graded a typical and saw it as excellent. The teacher said, "I am justifying what made the paper an excellent paper. The paper was reactionary, hypothetical, the language mechanics were of superior quality." "The paper was sequential in content as well," explained another teacher. The director called the activity to a stop. Each paper was assigned a number prior to the grading. The director then listed on the blackboard the numbers typical, excellent, and low and asked the teachers about their perception and understanding of the workshop (to show some metaphysical learning). Some of the teachers responded saying: "The workshop gave us ownership of the standard of teaching and assessment." Another commented: "The workshop gave us the elements on how to score the students' works to enable them to do better work." Another teacher saw the workshops as a sharing time. The director in turn commented: "Realistic explanations help to understand expectations and goals of the district and the standards."

APPENDIX C

SAMPLE INTERVIEW QUESTIONS

The following protocol contains sample questions that the researcher asked the participants in the interview. The questions were used to address the six variables.

Questions for the Superintendent

1. *How long have you been a superintendent in this school system and how long have you been involved in Quality Management?*
2. *What are the district goals and philosophy?*
3. *What are the beliefs that guide your decision in implementing Quality Management in your district?*
4. *How does QM affect your leadership style?*
5. *How did the staff feel about the program when it was first introduced?*
6. *What effect is QM having on administrators', teachers', and students' attitudes and behaviors?*
7. *Is the program limited to teachers and the principal alone or to one part of the school operation?*
8. *What kind of training did you institute to establish the program?*
9. *How is the program progressing through the system?*
10. *How do the parents and board members feel about the program?*
11. *How much improvement have you made personally and school-community-wise?*
12. *What is the difference in how you communicate with the staff and stakeholders before and now?*
13. *What new skills are the community as a whole learning from Quality Management?*
14. *What skills are the students gaining through QM that can be associated with skills needed in the next century?*
15. *What structure is in place to sustain the stability of QM?*

Principal

1. *How long have you been in this position?*
2. *What are your beliefs about Quality Management?*
3. *How does it affect your style of leadership?*
4. *How are decisions made regarding students' learning before QM and now?*
5. *Do you plan improvement with the staff only when you have a problem?*
6. *What are the school goals and the philosophy?*
7. *What kind of system of support do you use to improve teachers' performance?*
8. *What are the teachers' perceptions about QM?*
9. *How do you think this theory will help schools move into the 21st century swiftly?*
10. *What improvements in the schools have you made since the advent of QM?*

Teachers

1. *How does Quality Management in your school district affect your life?*
2. *What are the school goals and the philosophy?*
3. *What is most striking of your experiences about QM?*
4. *What is it like to be part of a team?*
5. *How do you describe your school now and before QM?*
6. *How does the whole school atmospheric condition affect teachers and administrators?*
7. *What is the nature of communication that exists among teachers and between administrators and teachers?*
8. *How do you measure students' success?*
9. *How does the administrator measure the teachers' performance?*

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10. *What changes in student achievement are occurring, and how does Quality Management help you do your work better?*

Students

1. *What does Quality Management mean to you as a student?*
2. *How do you know when you are doing quality work?*
3. *What is your most striking experience working in groups?*
4. *How often do you work in groups in each of your classes?*
5. *How is the nature of the work you do now different from what you used to do?*
6. *How do you feel about yourself and about your school?*
7. *What do you enjoy most about your school?*
8. *What is the nature of the relationship that exists between you and other students?*
9. *How do your teachers measure your success?*
10. *What skills do you think you are gaining in school that will help you succeed in the future?*

Board Members

1. *What are your beliefs about Quality Management in your school district?*
2. *What are the district goals and philosophy?*
3. *Is the way the school operates consistent with the philosophy?*
4. *How do you think QM affects the education of the children?*
5. *What communication occurs between the school and the board members?*
6. *What improvements have you observed since the advent of QM?*
7. *Is the community pleased with the service of the school?*
8. *How do you feel about the role of teachers in a Quality Management school?*
9. *What new skills is the whole community learning?*

Parents

1. *Describe Quality Management in your school district?*
2. *What does Quality Management mean to you and your child?*
3. *What is the nature of communication that occurs between you and the school?*
4. *What are the school's open houses like?*
5. *What is the reflection of schooling you see in your child's growth since the inception of Quality Management?*
6. *Are you satisfied with the kind of education your child is receiving and the atmospheric condition of the school*
7. *What do you like most about your child's school?*

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